

CECW-ED

**DEPARTMENT OF THE ARMY
U.S. Army Corps of Engineers
Washington, DC 20314-1000**

EC 1110-2-291

Circular
No. 1110-2-291

31 October 1997

**EXPIRES 30 SEPTEMBER 1999
Engineering and Design
STABILITY ANALYSIS OF CONCRETE STRUCTURES**

1. Purpose. This circular transmits a draft engineer manual (EM) to be used as interim criteria for stability analysis of gravity structures.

2. Applicability. This circular applies to all USACE Commands having responsibilities for civil works projects. The criteria in the draft EM shall be used for all stability analyses being performed as part of project authorization studies. The criteria may also be used, at the designer's option, for stability analyses being performed for any other projects currently being designed or evaluated.

3. References. See Appendix A.

4. Distribution Statement. Approved for public release, distribution is unlimited.

5. Discussion. This draft EM consolidates and standardizes stability requirements which are currently contained in several other EMs and Engineer Technical Letters. Changes contained in Chapters 3 and 4 will provide adequate safety factors for all types of structures and loading conditions, while reducing the current excess conservatism for infrequent loadings of short duration. This is primarily due to use of consistent definitions for load case categories. The draft EM is written to be compatible with risk-based planning and design methods currently being implemented within USACE.

6. Action Required. This draft EM should be used as interim guidance, as discussed in paragraph 2, pending publication of the final EM. Any comments regarding improvements or clarifications should be submitted to HQUSACE (CECW-ED), Washington, DC 20314-1000, within one year of the publication of this EC.

FOR THE COMMANDER:

6 Appendices
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ROBERT W. BURKHARDT
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